



NOVARIANT™

July 29, 2011

Marlene H. Dortch, Secretary  
Federal Communications Commission  
445 12<sup>th</sup> Street SW  
Washington, DC 20554  
Re: IB Docket No. 11-109

Dear Ms. Dortch,

I am writing this letter to express my deep concern about the possibility that the FCC may allow LightSquared Subsidiary, LLC to deploy a nationwide network of ground stations operating in the 1525-1559 Megahertz MSS (Mobile Satellite Services) band of frequencies, which are very near the civilian GPS frequency of 1575.5 Megahertz.

Recent FCC-mandated testing by an industry Technical Working Group has shown massive interference to nearly all GPS receivers tested during test broadcasts on LightSquared's frequencies. LightSquared has responded with a recommendation to the FCC proposing minor changes to their plans to mitigate the interference, but offer no supporting technical data. They are clearly trying to convince the FCC that there won't be a problem without having to prove that their claims are true. They are attempting to use public relations tactics to overcome opposing arguments that are based on known facts, such as the laws of physics and the current state of the art electronics technology.

The MSS band was never intended for use as a ground network, because the signals from ground stations are billions of times more powerful than the signals from satellites, and would cause massive interference with equipment designed to receive satellite signals in the MSS band. Essentially all of the high-precision GPS receivers used in Agriculture, Surveying, Construction and other industries requiring precise positioning, are designed to receive differential correction signals from satellites operating in the MSS band. LightSquared is trying to blame the GPS manufacturers for designing products that use signals in the MSS band, yet LightSquared owns satellites which broadcast some of these GPS correction signals. The GPS manufacturers had to design products to receive signals in the MSS band, and did so believing that the purpose of this band would always be for signals broadcast from satellites, not ground stations.

The economic benefits of the Civilian GPS industry in the US is over \$100 billion per year, as you can see documented in the attached white paper. If LightSquared is allowed to proceed to deploy their ground network in the 1525-1559 Megahertz MSS band, a significant amount of this benefit will be lost in the short term by making a vast majority of the high-accuracy GPS receivers either totally non-functional, or not accurate enough to perform their intended purposes.

Novariant Inc.  
45700 Northport Loop East  
Fremont, CA 94538  
T > 510.933.4800  
F > 510.933.4801  
[www.novariant.com](http://www.novariant.com)

In the industry that my company operates, Agriculture, the typical farmer or farm services provider has thousands, to tens of thousands, and in some cases hundreds of thousands of dollars, invested in high-accuracy GPS receivers and related monitors and controllers that would no longer be usable for their intended purpose.

Our products at Novariant, Inc. rely on high-accuracy GPS to function. Although we are a small company, the economic and environmental benefits of my company's products are huge. If LightSquared is allowed to proceed with deployment of their ground station network, it will have a major impact on all users of high accuracy GPS. Also note that since LightSquared will only operate in the US, at least initially, other countries throughout the world will continue to benefit from the use of high-accuracy GPS, even though the US citizens who fund the GPS system, may not be able to do so without major reinvestment in new equipment that may take years for the GPS manufacturers to develop.

I urge you to take all the possible actions that you can to prevent LightSquared from being allowed to deploy their ground network operating at frequencies in the MSS band.

Respectfully,



Chris Ragot  
President and Chief Executive Officer